CONTENTS

Volume 16, Issues No. 1–12 (1996)

JOURNAL OF CLIMATOLOGY

Issue No. 1, January

Shortwave Radiative Cloud Forcing in the Tropical Pacific Including the 1982–1983 and 1987 El Niños: L. Zhou, R. T. Pinker and I. Laszlo 1

Climate Implications of the Observed Changes in Ozone Vertical Distribution: M. Rajeevan 15

Empirical Study on Nimbus-7 Snow Mass and Indian Summer Monsoon Rainfall: R. H. Kripalani, S. V. Singh, A. D. Vernekar and V. Thapliyal 23

Analysis of Severe Rainstorms over Gujarat and Punjab During the 1993 Monsoon: A. K. Kulkarni, B. N. Mandal and R. B. Sangam 35

Relationships Between Precipitation Event Types and Topography in the Southern Blue Ridge Mountains of the Southeastern USA: C. E. Konrad II 49

Sea-Ice and Atmospheric Circulation Anomalies in the Labrador Sea Region Associated with Extremes of the Southern Oscillation: J. P. Newell 63

Circulation and Extreme Rainfall Conditions in the Eastern Mediterranean During the Last Century: H. Kutiel, P. Maheras and S. Guika 73

Modelling Solar Radiation in Steeply Sloping Terrain: M. J. Varley, K. J. Beven and H. R. Oliver 93

Estimation of Extreme Indian Monsoon Rainfall: D. E. Reeve 105

Full Moon and Empty Skies?: T. J. Lauroesch, J. R. Edinger Jr. and J. T. Lauroesch . 113

INDEXES TO VOLUME 15 119

Issue No. 2, February

ENSO-Snow-Monsoon Associations and Seasonal-Interannual Predictions: S. Yang . 125

Regional Teleconnection Patterns Associated with Summer Rainfall Over South Africa, Namibia and Zimbabwe: M. R. Jury 135

Summer Moisture Availability Over Europe in the Hadley Centre General Circulation Model Based on the Palmer Drought Severity Index: P. D. Jones, M. Hulme, K. R. Briffa, C. G. Jones, J. B. Mitchell and J. M. Murphy 155

Temporal and Spatial Variability of Annual Precipitation in Costa Rica and the Southern Oscillation: P. R. Waylen, M. E. Quesada and C. N. Caviedes 173

Relationships Between Geopotential Heights and Temperature in the South-eastern US During Wintertime Warming and Cooling Periods: P. A. Knapp and Z. Yin . . 195

A Method for the Reconstruction and Temporal Extension of Climatological Time Series: F. Valero, J. F. Gonzalez, F. J. Doblas and J. A. Garcia-Miguel 213

Broad-band Turbidity Parameters and Spectral Band Resolution of Solar Radiaation for the Period 1954–91 in Athens, Greece: C. P. Jacovides and J. D. Karalis 229

Issue No. 3, March

Certain Seasonal Characteristic Features of Oceanic Heat Budget Components Over the Indian Seas in Relation to the Summer Monsoon Activity Over India: U. C. Mohanty, K. J. Ramesh and M. C. Pant 243

An Air Transport Climatology for Subtropical Southern Africa: P. D. Tyson, M. Garstang, R. Swap, P. Kallberg and M. Edwards 265

Interannual Temperature Variability and Associated Synoptic Climatology at Cape Town: K. M. Levey and M. J. Jury 293

Spatial Modelling of New Zealand Temperature Normals: X. Zheng and R. E. Basher 307

Characterization of Extreme Rainfall in an East Asian Monsoon-Climate Catchment in the Upper Reaches of the Huai River, China: C. Svensson and R. Berndtsson . . . 321

A Comparison Between Spatial Winter Indices and Expenditure on Winter Road Maintenance in Scotland: D. Cornford and J. E. Thornes 339

Book Review 359

Issue No. 4, April

Calculating Regional Climatic Time Series for Temperature and Precipitation: Methods and Illustrations: P. D. Jones and M. Hulme 361

Non-dimensional Measures of Climate Model Performance: I. G. Watterson 379

Signatures of a Universal Spectrum for Atmospheric Interannual Variability in COADS Surface Pressure Time Series: A. M. Selvam, J. S. Pethkar, M. K. Kulkarni and R. Vijayakumar 393

Relationship of Air Temperatures in New Zealand to Regional Anomalies in Sea-Surface Temperature and Atmospheric Circulation: R. E. Basher and C. S. Thompson 405

M_n and S_c Signals in North Atlantic Tropical Cyclone Occurrence: R. G. Currie . . . 427

Canada's Chinook Belt: L. C. Nkemdirim 440

Observed Changes in Maximum and Minimum Temperatures in Turkey: M. Türkes, U. M. Sümer and G. Kiliç 462

The Energy Balance of a Melting Snowpack in the French Pyrenees During Warm Anticyclonic Conditions: G. R. McGregor and A. F. Gellatly 478

Issue No. 5, May

The Impact of Mount Pinatubo on World-wide Temperatures: D. E. Parker, H. Wilson, P. D. Jones, J. R. Christy and C. K. Folland 487

Time-scales of the Variability of the Atmosphere: A. G. Barnston 499

The Spatial Response of the Climate System to Explosive Volcanic Eruptions: P. M. Kelly, P. Jia and P. D. Jones 537

The Impact of Clearing for Agriculture on the Surface Energy Budget: T. J. Lyons, R. C. G. Smith and H. Xinmei 551

North-South Shifts of the Gulf Stream: Ocean-atmosphere Interactions in the North Atlantic: A. H. Taylor 559

Spatial and Temporal Fluctuations of Monthly Rainfall in the British Isles and Variations in the Mid-latitude Westerly Circulation: J. Mayes 585

Self-organized Criticality in Closed Ecosystems: Carbon Dioxide Fluctuations in Biosphere 2: R. J. Cronise, D. A. Noever and A. Brittain 597

Book Reviews 603

Issue No. 6, June

On the Relationship Between Eurasian Snow Cover and the Asian Summer Monsoon: M. Sankar-Rao, K. M. Lau and S. Yang 605

The Impact of Indian Ocean SST on the Large-Scale Asian Summer Monsoon and the Hydrological Cycle: Y. Zhu and D. D. Houghton 617

Thermodynamic Structure of the Maritime Troposphere Around the Australian Continent: R. Boers and A. J. Prata 633

Climatic Change Over the Mediterranean and Links to the More General Atmospheric Circulation: J. M. Reddaway and G. R. Bigg 651

Comparison of Two Models Relating Precipitable Water to Surface Humidity Using Globally Distributed Radiosonde Data Over Land Surfaces: B. J. Choudhury . . . 663

A Review of Two National Rainfall Series: M. R. Woodley 677

Rainfall Variability Over Bangladesh and Nepal: Comparison and Connections with Features Over India: R. H. Kripalani, S. Inamdar and N. A. Sontakke 689

Historical Thermometer Exposures in Australia: N. Nicholls, R. Tapp, K. Burrows and D. Richards 705

Month-to-Month Variation of Global Solar Radiation in Catalonia (Spain): J. M. Santabarbara, J. Calbo, J. M. Baldasano, J. Esteve and A. Mitja 711

Issue No. 7, July

Decadal Variations of the Southern Hemisphere Circulation: D. J. Karoly, P. Hope and P. D. Jones 723

Climatological Characteristics of Springtime Lower Tropospheric Airflow Over Central and Eastern North America: J. A. Winkler, J. R. Harman, E. A. Waller and J. T. Brown 739

An Abrupt Change in the Intensity of the East Asian Summer Monsoon Index and its Relationship with Temperature and Precipitation Over East China: N. Shi and Q. Zhu 757

Trends of Maximum and Minimum Daily Temperature in Central and Southeastern Europe: R. Brázdil, M. Budíková, I. Auer, R. Böhm, T. Cegnar, P. Faško, M. Lapin, M. Gajić-Čapka, K. Zaninović, E. Koleva, T. Niedźwiedź, S. Szalai, Z. Ustrnul and R. O. Weber 765

SOI Phases and Climatic Risk to Peanut Production: A Case Study for Northern Australia: H. Meinke, R. C. Stone and G. L. Hammer 783

Atmospheric Moisture Budget During a Bangladesh Flood Event: T. N. Krishnamurti, H. S. Bedi, D. K. Oosterhof and G. D. Rohaly 791

Temperature Variations in Spain Since 1901: a Preliminary Analysis: J. J. Oñate and A. Pou 805

Albedo and Depth of Melt Ponds on Sea-ice: M. P. Morassutti and E. F. LeDrew . . . 817

BOOK REVIEWS

Valuating Climate Change: The Economics of the Greenhouse. Solar Influence on Global Change 839

Issue No. 8, August

Global Distribution of Plant-Extractable Water Capacity of Soil: K. A. Dunne and C. J. Willmott 841

Interannual Rainfall Variability in North-East Brazil: Observation and Model Simulation: A. Harzallah, J. O. Rocha de Aragao and R. Sadourny 861

Vertical Motion Changes Related to North-East Brazil Rainfall Variability: A GCM Simulation: P. Roucou, J. O. Rocha de Aragao, A. Harzallah, B. Fontaine and S. Janicot 879

An Intercomparison of Computer-assisted Circulation Classification Methods: R. Huth 893

Seasonal Variations of the Relationship Between Some ENSO Parameters and Indian Rainfall: K. D. Prasad and S. V. Singh 923

Urban Influences on South African Temperature Trends: W. S. Hughes and R. C. Balling Jr 935

The Relationship Between Cloud Droplet and Aerosol Number Concentrations for Climate Models: I. Gultepe and G. A. Isaac 941

Measurement and Analysis of Ultraviolet Solar Irradiation in Valencia, Spain: J. A. Martinez-Lozano, F. Tena and M. P. Utrillas 947

BOOK REVIEWS

Human Impacts on Weather and Climate 957

Mountain Environments in Changing Climates 957

Wind Blown Sediments in the Quaternary Record 958

Erratum 959

Issue No. 9, September

Sub-grid Scale Topography and the Simulation of Northern Hemisphere Snow Cover: D. J. Walland and I. Simmonds 961

A New Spatial Synoptic Classification: Application to Air Mass Analysis: L. S. Kalkstein, M. C. Nichols, C. D. Barthel and J. S. Greene 983

Historical Snow Cover Variability in the Great Plains Region of the United States: 1910 Through 1993: M. G. Hughes and D. A. Robinson 1005

Synoptic Controls on Precipitation in the Valley of Oaxaca, Mexico: M. Dilley 1019

Convective Rainfall Regions of Puerto Rico: M. M. Carter and J. B. Elsner 1033

The CLO: a Utilitarian Unit to Measure Weather/Climate Comfort: Y. Y. Yan and J. E. Oliver 1045

Spatial and Temporal Analysis of Annual Rainfall Variations in Turkey: M. Turkes . . 1057

BOOK REVIEW

Ocean-Atmospheric Interaction and Climate Modelling 1077

Issue No. 10, October

Grid Box or Grid Point: What Type of Data do GCMs Deliver to Climate Impacts Researchers?: W. C. Skelly and A. Henderson-Sellers 1079

Characteristic Frequency Distributions of Remotely Sensed *IN SITU*- and Modelled Wind Speeds: E. Bauer 1087

Comparison of Approaches for Estimating Time-Averaged Precipitation Using Data from the USA: C. J. Willmott, S. M. Robeson and M. J. Janis 1103

Synoptic Mechanisms Associated with Snowfall Increases to the Lee of Lakes Erie and Ontario: D. J. Leathers and A. W. Ellis 1117

A Note on the Timing of Precipitation Variability in Zimbabwe as Related to the Southern Oscillation: P. Waylen and S. Henworth 1137

Droughts Over Southern Africa in a Doubled-CO_2 Climate: A. M. Joubert, S. J. Mason and J. S. Galpin 1149

Representation of Daily Rainfall Distributions Using Normalized Rainfall Curves: I. T. Jolliffe and P. B. Hope 1157

The Autoregressive Model of Climatological Time Series: An Application to the Longest Time Series in Portugal: S. M. Leite and J. P. Peixoto 1165

Continental Polar Outbreaks into the Levant and Eastern Mediterranean: H. Saaroni, A. Bitan, P. Alpert and B. Ziv 1175

BOOK REVIEW
Publications de l'Association Internationale de Climatologie 1193

Erratum 1195

Issue No. 11, November

Resistant, Robust and Non-parametric Techniques for the Analysis of Climate Data: Theory and Examples, Including Applications to Historical Radiosonde Station Data: J. R. Lanzante 1197

The Development of Composite Temperature Records: B. C. Trewin and A. C. F. Trevitt 1227

Evidence for Luni-Solar M_n and Solar Cycle S_c Signals in Australian Rainfall Data: R. G. Currie and R. G. Vines 1243

Short- and Medium-Term Trends in the Hydrometeorology of the Central Southern Alps, New Zealand: H. A. McGowan and A. P. Sturman 1267

The Influence of Clouds on the Radiation Budget of Ice and Snow Surfaces in Antarctica and Greenland in Summer: R. Bintanja and M. R. van den Broeke . . . 1281

Long-Term Variability in the Low-Level Inversion Layer Over the Arctic Ocean: J. W. Kahl, D. A. Martinez and N. A. Zaitseva 1297

An Analysis of Antarctic Sea-Ice and Extratropical Cyclone Associations: C. R. Godfred-Spenning and I. Simmonds 1315

The Antarctice Temperature Inversion: W. M. Connolley 1333

Variance Contribution of Luni-Solar (M_n) and Solar Cycle (S_c) Signals to Climate Data: R. G. Currie 1343

Extreme Winter Minimum Temperatures in Catalonia (North-East Spain): Expected Values and Their Spatial Distribution: X. Lana and A. Burgueño 1365

Forecasting the Spatial Variability of the Indian Monsoon Rainfall Using Canonical Correlation: K. D. Prasad and S. V. Singh 1379

Spatial and Temporal Variations in the Relationships between the Southern Oscillation Phenomenon and the Rainfall of Sri Lanka: R. Suppiah 1391

Ring-width Variations in *Cedrus deodara* and its Climatic Response Over the Western Himalaya: H. P. Borgaonkar, G. B. Pant and K. Rupa Kumar 1409

BOOK REVIEWS
Space and Time Scale Variability and Interdependencies in Hydrological Processes . 1423

Prediction of Solar Radiation in Areas with a Specific Microclimate 1424

ERRATUM 1425